

Strawberry 8-153
Creek

MEMORANDUM

Date: December 21, 1994
From: Allan Bacon
To: Planning Files
Subject: Strawberry Creek, Bautista Creek Sampling on
September 23, 1994

218

Purpose

Strawberry Creek and Bautista Creek were sampled on September 23, 1994 as part of the Planning Section Ambient Sampling program. In addition, data was collected for the stormwater program. The sampling was performed by Pavlova Vitale of the Storm Water Investigation Section and Allan Bacon of the Planning Section.

Three locations were sampled along Strawberry Creek and one location along Bautista Creek. The sample location for Bautista Creek was chosen because of its flow, accessibility, and repeatability. The locations along Strawberry Creek had either been previously sampled, or would facilitate accurate data for the stormwater investigation.

Sampling Locations

B-1 Bautista Creek near headwaters

This location was just downstream of the summer headwaters of Bautista Creek. The location is just north west of Tripps Flats Road and on the east of Bautista Canyon Road. The exact location can not be pinpointed. It is generally easy to find. As Bautista Creek follows Bautista Canyon Road, the riparian habitat changes from coastal sage scrub to a thick green coverage. The thick green riparian habitat is only about 1/2 mile long. Within this short distance the headwaters and the majority of the flow is found for Bautista Creek.

The headwater of Bautista Creek is a natural spring that starts in a relatively rocky portion of the creek bed. The substrate of the stream bed is also rocky. The flow at the sample location is estimated to be 0.25 cfs. The stream width was narrow, and varied from two to three feet. There was no fish seen, but many aquatic invertebrates. In addition, there was indication of other wildlife usage, including deer. The water was very clear in most areas. In a open, sunlit area there was some algae and foaming.

At this location five constituents violated basin plan objectives. Chloride was measured at 46 mg/L exceeding the 20 mg/L objective. Sodium was measured at 50 mg/L exceeding the 25 mg/L objective. Sulfate was measured at 78 mg/L exceeding the 20 mg/L objective. Total dissolved solids (TDS) was measured at 551 mg/L exceeding the 250 mg/L objective. Hardness was measured at 256 mg/L, exceeding the 130 mg/L objective. In addition, total coliform was measure at 130 MPN/100 ml, exceeding the drinking water MCL for MUN designated waters, of 100 MPN/100 ml.

There was one unusual thing seen in several areas. Along most of the streambed, there were orange colored particles, and in the sunlit area a large patch of orange algae. The orange particles are probably a reduced form of iron. The largely clay soils effectively reduce the iron in the soil. As the water travels subsurface, it leaches the reduced iron from the soil. As the water travels along the surface the iron is deposited on the streambed. These iron deposit can be taken up by certain algae and produce orange algae blooms.

The exceedences that occur are probably due to natural causes. Because Bautista Creek begins as spring, the water must have significant subsurface travel. This subsurface travel will increase the minerals in the water, producing higher TDS, hardness, sodium, chloride and sulfate. The coliform objective violation is probably due to the animal usage that occurs in the creek.

S3--Strawberry Creek Near Headwaters

This location was as close to the headwaters as possible. The sample was taken at Forest Haven Drive. The riparian habitat was of older growth type trees, most larger than 6 inches in diameter. The flow at this point was approximately 1/2 cfs. The water was very clear. The substrate was mostly large boulders. The water pooled in several areas. In these pooled areas the water was as much as 2 feet deep. In many of these areas, large fish were abundant (6 inches long).

At this location sodium was measured at 13 mg/L exceeding the 10 mg/L basin plan objective. In addition, total coliform was measured at 130 MPN/100 ml exceeding the 100 MPN/100 ml drinking water objective.

S2--Strawberry Creek on Highway 273 at Idylwild Pines Camp

This location was chosen because it was downstream of most of the city of Idylwild. The flow at this location is estimated to be 1/2 cfs during sampling. As was the upstream location, the riparian habitat was of the old growth type, and the substrate was primarily rock. There was some foaming noticed stagnant areas. There were no fish seen in the creek at this location.

At this location sodium was measured at 19 mg/L exceeding the 10 mg/L basin plan objective. In addition, total coliform was measured at 300 MPN/100 ml exceeding the 100 MPN/100 ml drinking water objective.

S4--Strawberry Creek at Highway 74

This location was just upstream of the confluence with the San Jacinto River. Although there was no flow through at this location, there were large pools of water. The pools were all about 1 foot deep and 4 feet wide, and varied from 20 to 30 feet in length. There was some flow occurring between pools.

The riparian habitat was similar to both upstream locations, with old growth trees. Because of the lower elevation, coastal sage scrub was the main upland plants. The substrate was made up of large rocks and boulders. The water was clear, with the exception of sheen on the top of the water. There was no algae or foaming seen at this location. There were some small fish that resembled tadpoles or similar vertebrate fish.

At this location three constituents violated established basin plan objectives. Chloride was measured at 20 mg/L exceeding the 15 mg/L objective. Sodium was measured at 29 mg/L exceeding the 10 mg/L objective. TDS was measured at 190 mg/L exceeding the 150 mg/L objective.

SAMPLE RESULTS FOR BAUTISTA AND STRAWBERRY CREEKS

94 data

CONSTITUENT	LOCATION		LOCATION			
	B1	BPO/MCL	S3	S2	S4	BPO/MCL
AMMONIA	0		0	0	0	
TKN	0.3		0	0.2	0	
NITRATE	0.8	1	0	0.8	0	1
NITRITE	0		0	0	0	
TOTAL PHOSPHORUS	0.07		0.05	0.09	0.08	
ORTHOPHOSPHATE	0.06		0.05	0.09	0.07	
ALKALINITY	210		54	67	114	
BICARBONATE	256		66	82	139	
BORON	0.1	0.75	0.1	0.1	0.1	0.75
CALCIUM	73		11	17	29	
CARBONATE	0		0	0	0	
CHLORIDE	46	20	5	13	20	15
EC	661		122	183	304	
FLOURIDE	0.4		0.1	0.1	0.2	
MAGNESIUM	18		1.8	2.6	5.6	
PH	7.92		7.24	7.61	6.95	
POTASSIUM	5.1		2	2.3	3.6	
SODIUM	50	25	13	19	29	10
HYDROXIDE	0		0	0	0	
SULFATE	78	20	2	5	7	20
TOTAL ANIONS	7.17		2.38	1.87	3.26	
TOTAL CATIONS	7.44		1.31	1.95	2.99	
TDS	551	250	93	129	190	150
HARDNESS	256	130	38	56	96	100
IRON	0.12		0	0.06	0.08	
TOTAL COLIFORM	130	100	130	300	70	100
FECAL COLIFORM	30		22	110	2	
OIL AND GREASE	-		-	0	0	

4

95 field

Note

.3 for

G.W.

NOTE

Bautista

Creek I ran

Is Twice

That of Strawberry Creek

-: ANALYSIS NOT REQUESTED

NOTE: ZERO (0) USED FOR ALL NON DETECT RESULTS FOR STATISTICAL PURPOSES

BPO/MCL: BASIN PLAN OBJECTIVES OR MAXIMUM CONTAMINENT LEVEL FOR DRINKING WATER STANDARDS ESTABLISH FOR THIS WATER BODY

APCL Analytical Report

Nov 10/20/94

Submitted to:
 CRWQCB: Santa Ana Region
 Attention: Nancy Olson-Martin
 2010 Iowa Avenue, Suite 100
 Riverside, CA 92507
 Tel: (909)782-4130 Fax: (909)781-6288

Service ID #: 801-944065
 Collected by: DAB/PV
 Collected on: 09/23/94
 Sample description:
 Water from Riverside County
 Project: Strawberry Creek / Bautista Creek

Received : 09/23/94
 Tested : 09/23-30/94
 Reported : 10/03/94

Analysis of Water

801-944065 Page 1 of 1

Component Analyzed	Method	Unit	PQL	Concentration			
				B1 94-4065-1	S3 94-4065-3	S2 94-4065-2	S4 94-4065-4
Ammonia (NH ₄ ⁺ -N)	350.2	mg/L	0.2	N.D.	N.D.	N.D.	N.D.
Nitrogen, Total Kjeldahl (TKN)	351.3	mg/L	0.2	0.3	N.D.	0.2	N.D.
Phosphorus, Total	365.2/365.3	mg/L	0.02	0.07	0.05	0.09	0.08
Nitrate (NO ₃ ⁻ -N)	SM4500NO3D	mg/L	0.5	0.8	N.D.	0.8	N.D.
Nitrite (NO ₂ ⁻ -N)	354.1	mg/L	0.02	N.D.	N.D.	N.D.	N.D.
Alkalinity	310.1	mg/L	2	210	54	67	114
Bicarbonate	SM2330B	mg/L	2	256	66	82	139
Boron, by colorimetry	212.3	mg/L	0.1	0.1	0.1	0.1	0.1
Calcium, Ca, by ICP	6010	mg/L	0.02	73	11	17	29
Carbonate	SM2330B	mg/L	2	N.D.	N.D.	N.D.	N.D.
Chloride Cl ⁻	325.3/9252	mg/L	1	46	5	13	20
Electric conductivity	120.1/9050	µS/cm	1	661	122	183	304
Fluoride (Total)	340.2	mg/L	0.1	0.4	0.1	0.1	0.2
Magnesium, Mg, by ICP	6010	mg/L	0.05	18	1.8	2.6	5.6
pH	150.1/9040	pH Unit	0.01	7.92	7.24	7.61	6.95
Potassium, K, by AA	258.1/7610	mg/L	0.01	5.1	2.0	2.3	3.6
Sodium, Na, by ICP	6010	mg/L	0.05	50	13	19	29
Hydroxide	SM2330B	mg/L	2	N.D.	N.D.	N.D.	N.D.
Sulfate (SO ₄ ⁻)	375.4/9038	mg/L	2	78	2	5	7
Total Anions	Calc.	meq/L		7.17	2.38	1.87	3.26
Total Cations	Calc.	meq/L		7.44	1.31	1.95	2.99
Solids, Total Dissolved (TDS)	160.1	mg/L	10	551	93	129	190
Hardness by Titration	130.2	mgCaCO ₃ /L	1	256	38	56	96
Phosphorus, Orthophosphate	365.2/365.3	mg/L	0.01	0.06	0.05	0.09	0.07
Iron, by AA	6010	mg/L	0.02	0.12	N.D.	0.06	0.08
Total Coliform, MTF, 3X5 tubes	SM9221B	MPN/100mL	2	130	130	300	70
Fecal Coliform, MTF, 3X5 tubes	SM9221C	MPN/100mL	2	30	22	110	2
Oil and Grease	413.2/9070	mg/L	1	-	-	N.D.	N.D.

PQL : Practical Quantitation Limit

- : Analysis not requested.

SM : Standard Methods for Examination of Water and Waste Water, 17th edition.

N.D. : Not Detected or less than the quantitation limit.

Respectfully submitted,

Dominic Lau
 Dominic Lau
 Laboratory Manager
 Applied P & Ch Laboratory

APCL

Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
Tel: (909) 622-5148 Fax: (909) 622-3199

Chain of Custody

Please Print in pen
Page 1 of 1

Client: ~~PCA~~ CB Contact: Nancy Olsen-Martin Tel: 909-782-4130 Fax: 909-781-6258
Address: 2010 Iowa Ave. St. 100 City: Riverside State: CA Zip code: 92507

Bill to: PCA-437 Service
Project Name/Code: Strawberry Creek/Bautista Crk Job# P.O.#
Project Address: N/A (Riverside County) Dennis Bacon
Due Date: regular rush days Sampled by: DAB/PV

Sample ID (Field No.) (Site ID)	Sample Description (Location, Depth, Color, Odor and other useful information)	Collected Date Time	G R A B	C O M P	Matrix Type	Preser- vation	# of Cont.	Analysis Items				Remark
								Nutrients	St&Minerals	Bacteria	Oil & Grease	
B1	Bautista Creek	9/23/94 10:40	✓		Water	H ₂ O from	3	✓	✓	✓		no oil + Grease
S2	Strawberry Creek at 273	9/23/94 12:15	✓		Water	" "	4	✓	✓	✓		
S3	Strawberry Creek at Forest Haven	9/23/94 2:55	✓		Water	" "	3	✓	✓	✓		no oil + Grease
S4	Strawberry Creek at 74	9/23/94 1340	✓		Water	" "	4	✓	✓	✓		

Hazards Associated with Samples: NONE Disposal Options: Return Disposal by Lab

Sample Conditions: Seal# _____: Intact; Broken; None Temp.: Cold; Room (°C). Hold Samples to _____

Relinquished by Dennis Olsen-Martin Date/Time 9/23/94 5:50 Received by [Signature] Date/Time 9-23-94 4:30

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

APCL USE ONLY Service (Case)# _____ Note: PCA Code = 437

1) The signature on this document authorizes APCL to perform the services indicated herein according to APCL's terms and conditions (available upon request).
2) Samples are discarded 45 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Field Form for Sampling

Water Body: Strawberry Creek

Date: 9/23/94

Sampled by: DAB

Air Temp: _____

Lab Analysis: Nutrients
DO
Bacteria
STD Minerals

Sample Location: _____ Time Sampled: _____
1. 54 - Strawberry Creek at Highway 74 1:40 pm
2. _____
3. _____
4. _____

Sample Location Comments: (Include water Temp., pH, EC, DO, etc.)

- Water pooled, no flow through, rocky substrate
only seen on surface of water, (large riparian)
habitat, wood pecker in the area, red pole or
fish like vert.
- No algae, no foaming, water is clear except
for the seen on sculpin
- About 1 foot deep & 20-300 foot long & 4
feet wide ponds.
- pH ~ 6.0 pH units
Sampling location just upstream of confluence of
San Jacinto River

General Comments:

Field Form for Sampling

Water Body: Strawberry Creek

Date: 9/23/94

Sampled by: DAB

Air Temp: _____

Lab Analysis S₂ Oil & Grease
Nutrients
Std Minerals
Bacterial

S₃ Nutrients
Std Minerals
Bacterial

Sample Location:

Time Sampled:

- | | |
|---|-----------------|
| 1. <u>S₂ - Strawberry Creek - 273 at</u> | <u>12:15 pm</u> |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. <u>S₃ - Headwaters ~ Humber Park</u> | <u>12:55 pm</u> |

Sample Location Comments: (Include water Temp., pH, EC, DO, etc.)

- Clear water, inverts, 1/2 CFS of flow, foaming
in ponding areas where there is ponding.
- Older riparian habitat, large trees, rocky substrate
no fish.
- Headwater sample taken at Forest Haven Drive
forested large fish ~ bunches in length, clear
water, 1/2 CFS flow, pH ~ 6.5 pH units
- ~ 12 foot deep at the headwaters
large fish seen in the pooled areas 4-6 inches in
length.

General Comments:

Field Form for Sampling

Water Body: Bautista Creek

Date: 9-23-94

Sampled by: DAB / PV

Air Temp: _____

Lab Analysis: Nutrient
B.C.T.
STP Union

Sample Location: _____ Time Sampled: _____
1. B1 - Bautista Creek @ Bautista 10:40
2. _____
3. _____
4. _____

Sample Location Comments: (Include water Temp., pH, EC, DO, etc.)

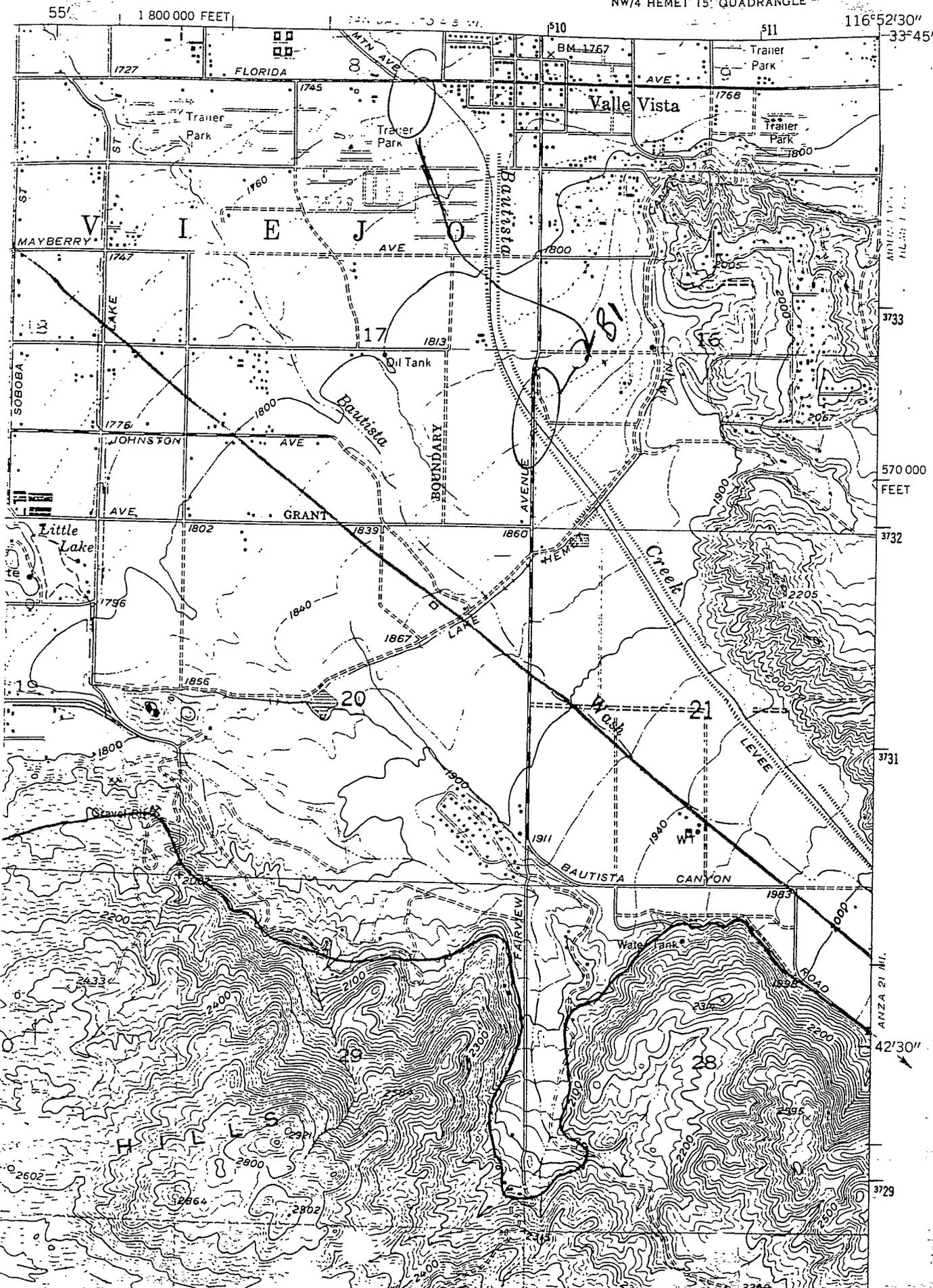
- Low flow ~ 1/4 CFS, area is very natural
no homes; pH indicator ~ 7.0 pH units
narrow stream ~ 2-3 feet.
- Rocky substrate, no fish, ^{some} aquatic inverts,
algae found upstream of sampling pt in a sunny area
- water very clear, no algae for most part
some foaming (very slight) possible bacterial
contamination.
- indication of animal usage including
deer (deer droppings, etc.)

General Comments: Bautista creek @ Florida Channelized
laked - Flood Control

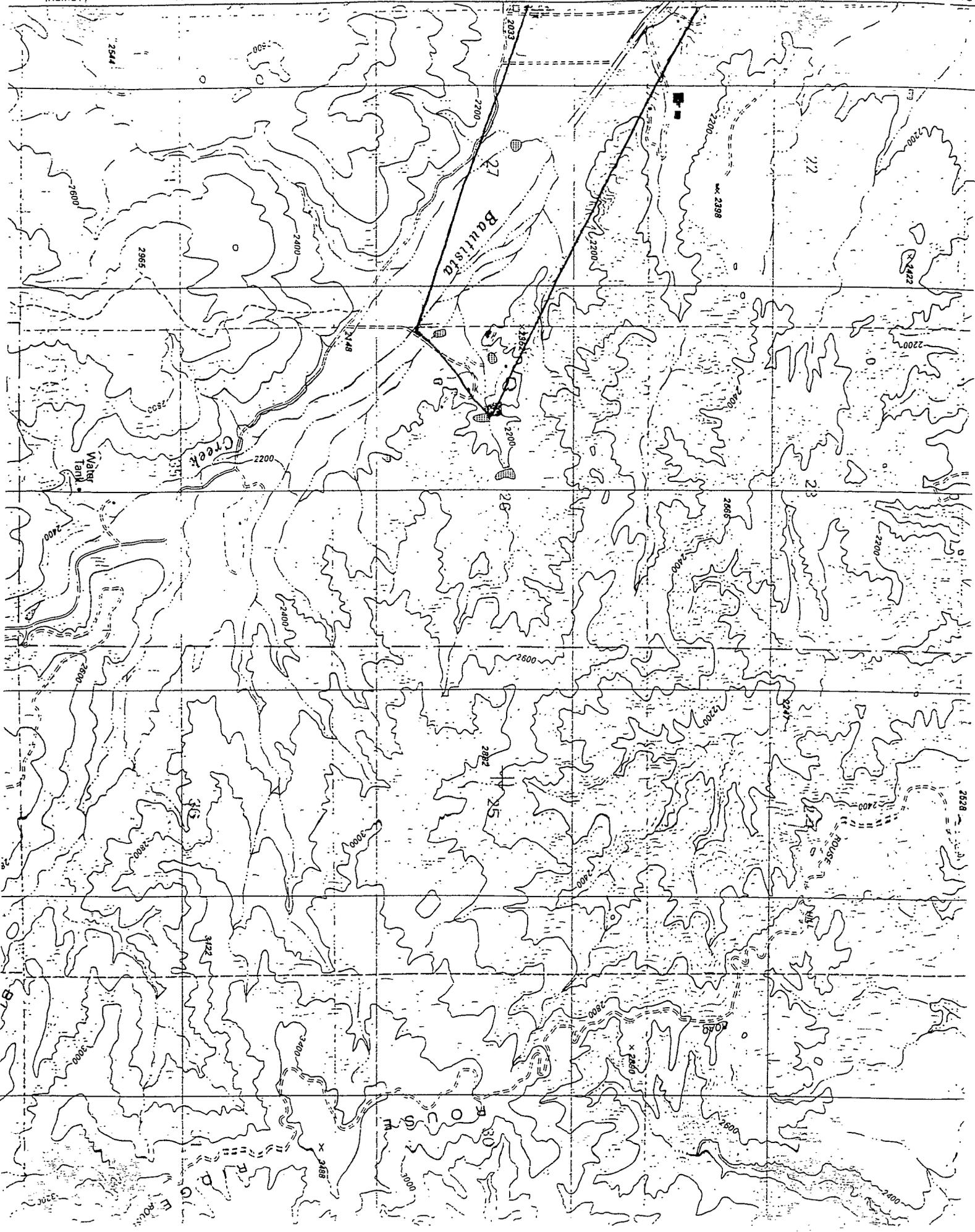
Samples taken near the headwaters
Just west of Tropps Flats Rd in the ^{head} waters

HEMET QUADRANGLE
CALIFORNIA—RIVERSIDE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 HEMET 15' QUADRANGLE

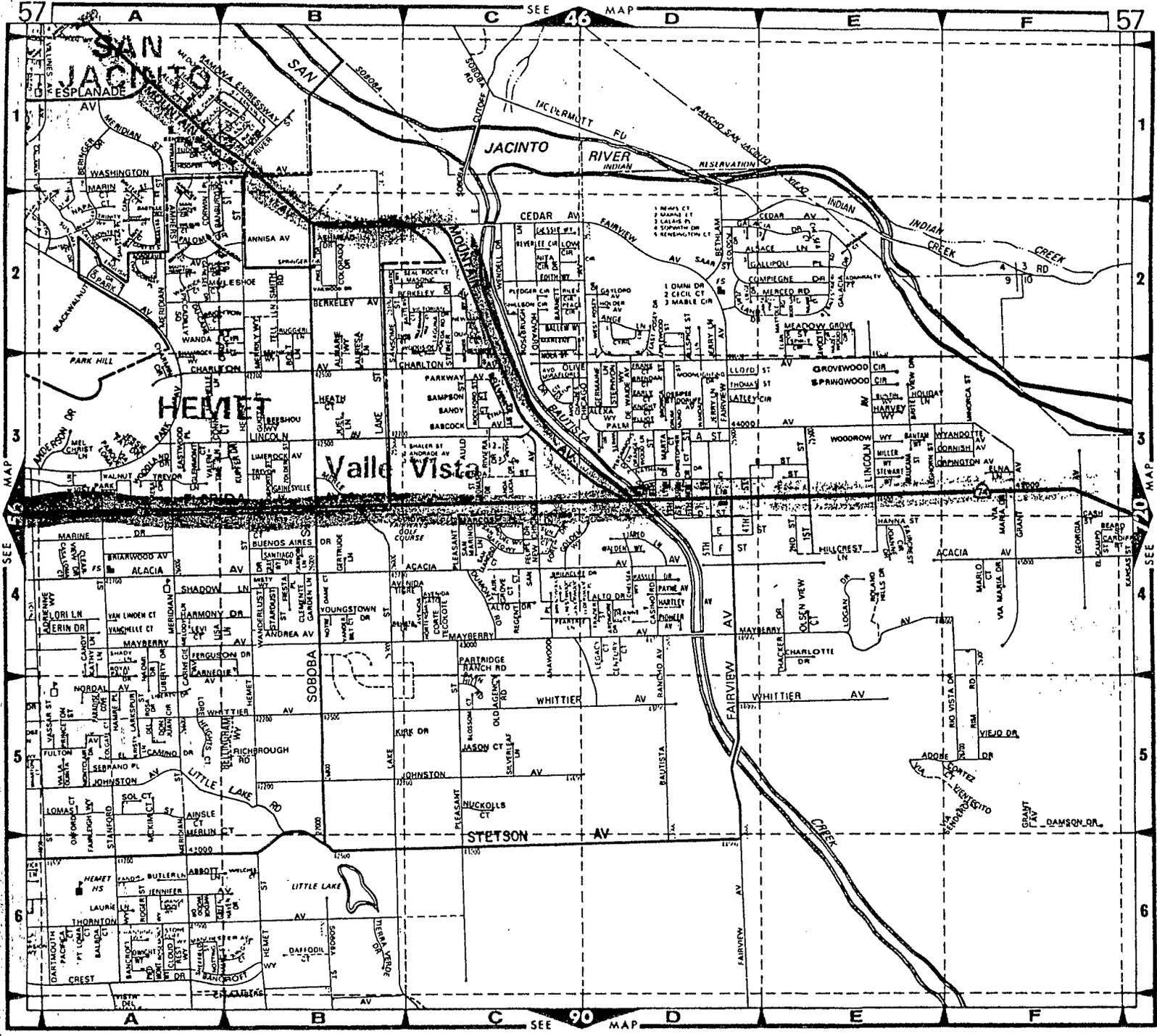
2651 IV SE
(LAKE FULMOR)



Bautista Creek



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RIVERSIDE CO.

DETAIL

57

57

MAP CH

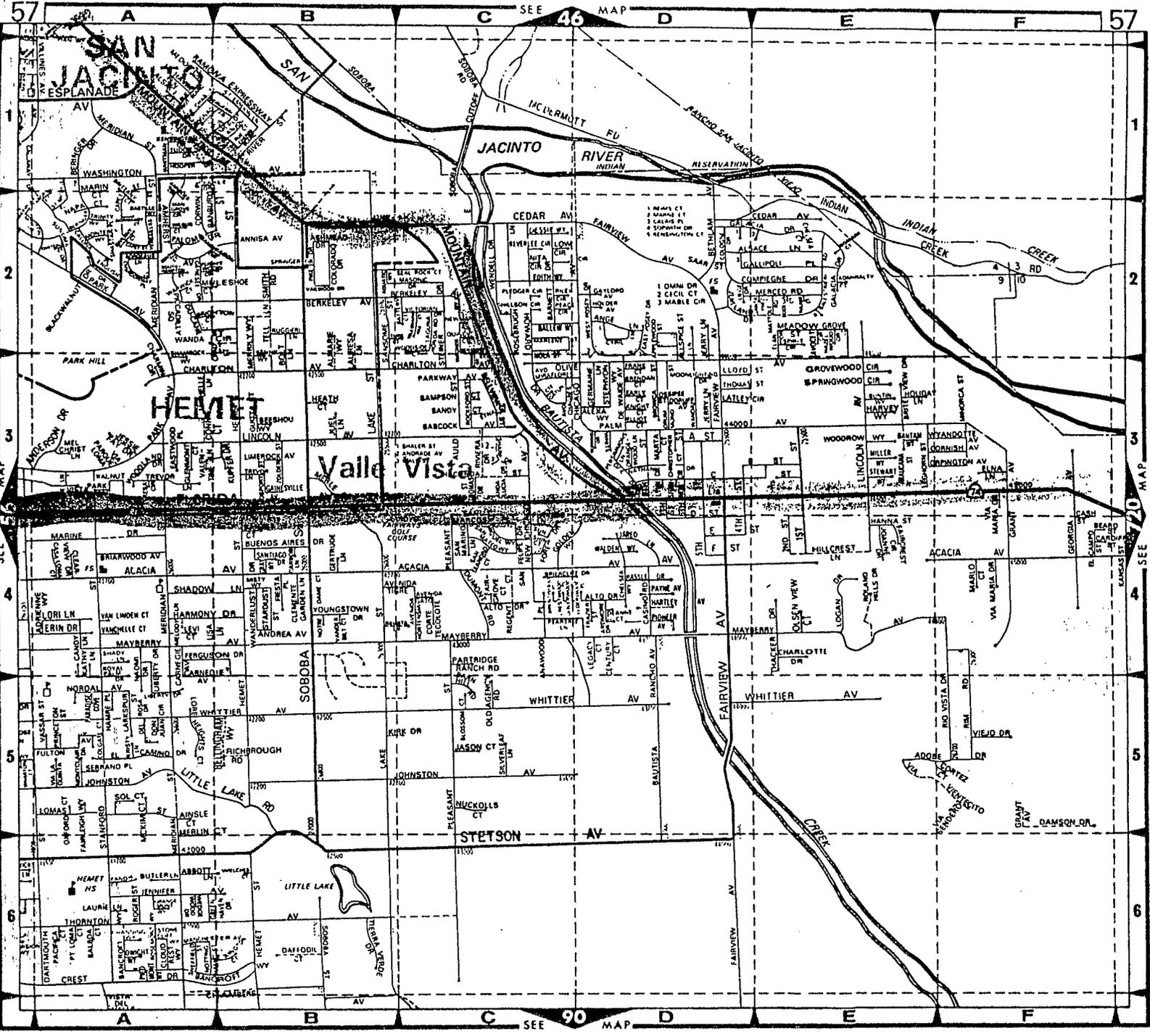
MAP CH

SEE 46

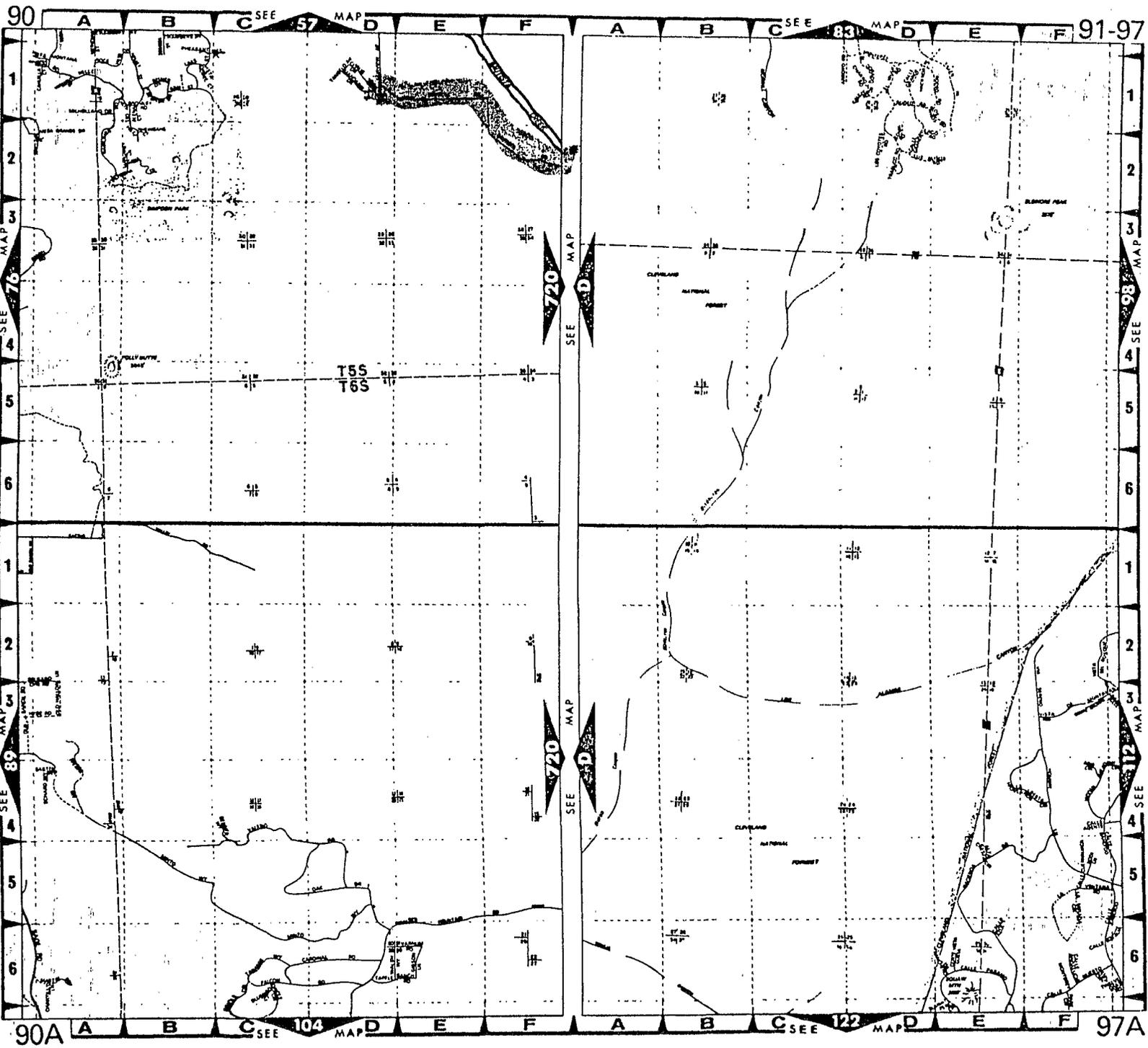
SEE 46

SEE 90

SEE 90



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RIVERSIDE CO.

DETAIL

90

A B C SEE 57 MAP D E F

1

2

3

4

5

6

1

2

3

4

5

6

90A

A B C SEE 104 MAP D E F

A B C SEE 83 MAP D E F 91-97

1

2

3

4

5

6

1

2

3

4

5

6

97A

122

MAP 76

SEE

MAP 89

SEE

MAP 720

SEE

MAP 83

SEE

MAP 104

SEE

MAP 720

SEE

MAP 720

SEE

MAP 720

SEE

MAP 122

SEE

MAP 97A

SEE

WQA
FIELD FORM

DATE: 4-26-95

AIR TEMP: _____

SAMPLER(S): DAB/DV

WATER BODY: Bautista Creek

SAMPLE LOCATION

#1: Bautista Creek @ Bautista Canyon Rd

#2: Bautista Creek parallel to Bautista Canyon Rd

#3: _____

#4: _____

H₂O TEMP: #1 _____

pH: #1 _____

EC: #1 _____

#2 _____

#2 _____

#2 _____

#3 _____

#3 _____

#3 _____

#4 _____

#4 _____

#4 _____

LAB ANALYSIS: ① Std Minerals ② Std Minerals

Gn. Nutrients Nutrients

COD

Microscope analysis

COMMENTS: Air temp 75°F Blue sky

Clear water - (to difficult to measure flow

Q₂ cfs)

WATER RESOURCES DIVISION

Sta. No. DISCHARGE MEASUREMENT NOTES Checked by

Date, 19 .. Party

Width .. Area .. Vel. .. G. H. .. Disch. ..

Method .. No. secs. .. G. H. change. .. in .. hrs. Susp.

Method coef. Hor. angle coef. Susp. coef. Meter No.

Type of meter .. Date rated .. Tag checked ..

Meter .. ft. above bottom of wt. Spin before meas. after ..

Meas. plots. % diff. from. rating. Levels obtained.

GAGE READINGS					WATER QUALITY MEASUREMENTS		
Time	Inside	ADR	Graphic	Outside	No	Yes	Time
					Samples Collected		
					No	Yes	Time
					Method Used		
					EDI	EWI	Other
					SEDIMENT SAMPLES		
					No	Yes	Time
					Method Used		
					EDI	EWI	Other
					BIOLOGICAL SAMPLES		
Weighted M.G.H.					Yes		Time
G. H. correction					No		Type
Correct M.G.H.							

Check bar chain found .. changed to .. at ..

Wading, cable, ice, boat, upstr., downstr., side bridge. feet, mile, above, below gage.

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%); based on the following cond:

Flow.

Cross section ..

Control ..

Gage operating .. Weather ..

Intake/Orifice cleaned .. Air .. °C@ .. Water .. °C@ ..

Record removed .. Extreme Indicator: Max. Min.

Manometer N₂ Pressure Tank .. Feed .. Bbl rate .. per min.

CSG checked .. Stick reading ..

Observer ..

HWM .. outside, in well

Remarks ..

Dist. from point	Width	Depth	Obstructions	Revolutions	Time in sec-mch	VELOCITY		Adjusted for hor. angle or	Area	Discharge
						At point	Mean in vertical			
	5'	3/10'				.24/sec				
		4/10				.52/sec				
		1/10				.6/sec				
		7 2/10				.95/sec				
						1.22/sec				
						.88/sec				
						.57/sec				
						.92/sec				
						1.4/sec				
						1.14/sec				
						1.09/sec				

8-162

date 10/20/94

Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona, CA 91766

Tel: (909) 622-5148 Fax: (909) 622-3199

APCL Analytical Report

Submitted to: CRWQCB: Santa Ana Region Attention: Nancy Olson-Martin 2010 Iowa Avenue, Suite 100 Riverside, CA 92507 Tel: (909)782-4130 Fax: (909)781-6288

Service ID #: 801-944065 Received: 09/23/94 Collected by: DAB/PV Tested: 09/23-30/94 Collected on: 09/23/94 Reported: 10/03/94 Sample description: Water from Riverside County Project: Strawberry Creek / Bautista Creek

Analysis of Water

801-944065 Page 1 of 1

Table with 8 columns: Component Analyzed, Method, Unit, PQL, B1, S3, S2, S4. Rows include Ammonia, Nitrogen, Phosphorus, Nitrate, Nitrite, Alkalinity, Bicarbonate, Boron, Calcium, Carbonate, Chloride, Electric conductivity, Fluoride, Magnesium, pH, Potassium, Sodium, Hydroxide, Sulfate, Total Anions, Total Cations, Solids, Hardness, Orthophosphate, Iron, Total Coliform, Fecal Coliform, and Oil and Grease.

PQL : Practical Quantitation Limit

- : Analysis not requested.

SM : Standard Methods for Examination of Water and Waste Water, 17th edition.

N.D. : Not Detected or less than the quantitation limit.

Respectfully submitted,

Dominic Lau

Laboratory Manager Applied P & Ch Laboratory

Field Form for Sampling

Water Body: Bautista Creek

Date: 9-23-94

Sampled by: DAB / PV

Air Temp: _____

Lab Analysis: Wetrich
EC
STU

Sample Location:

1. B1 - Bautista Creek @ Bautista
2. _____
3. _____
4. _____

Time Sampled:

10:40

Sample Location Comments: (Include water Temp., pH, EC, DO, etc.)

1. Low flow ~ 1/4 CFS, area is very natural
no homes; pH indicator ~ 7.0 pH units
narrow stream ~ 2-3 feet.
2. Loamy substrate, no fish, ^{some} aquatic inverts,
algae found upstream of sampling pt in a sunny area
3. water very clear, no algae for most part
some foaming (very slight) possible bacterial
contamination.
4. indication of animal usage including
deers (deer droppings, etc.)

General Comments:

Bautista creek @ Florida Channelized
Channel - Flood Control

Samples taken near the headwaters
Just west of Tripps Flats Rd is the ^{head} waters

SAMPLE RESULTS FOR BAUTISTA AND STRAWBERRY CREEKS

CONSTITUENT	LOCATION		LOCATION			
	B1	BPO/MCL	S3	S2	S4	BPO/MCL
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TKN	0.3		0	0.2	0	
NITRATE	0.8	1	0	0.8	0	1
NITRITE	0		0	0	0	
TOTAL PHOSPHORUS	0.07		0.05	0.09	0.08	
ORTHOPHOSPHATE	0.06		0.05	0.09	0.07	
ALKALINITY	210		54	67	114	
BICARBONATE	256		66	82	139	
BORON	0.1	0.75	0.1	0.1	0.1	0.75
CALCIUM	73		11	17	29	
CARBONATE	0		0	0	0	
CHLORIDE	46	20	5	13	20	15
EC	661		122	183	304	
FLOURIDE	0.4		0.1	0.1	0.2	
MAGNESIUM	18		1.8	2.6	5.6	
PH	7.92		7.24	7.61	6.95	
POTASSIUM	5.1		2	2.3	3.6	
SODIUM	50	25	13	19	29	10
HYDROXIDE	0		0	0	0	
SULFATE	78	20	2	5	7	20
TOTAL ANIONS	7.17		2.38	1.87	3.26	
TOTAL CATIONS	7.44		1.31	1.95	2.99	
TDS	551	250	93	129	190	150
HARDNESS	256	130	38	56	96	100
IRON	0.12		0	0.06	0.08	
TOTAL COLIFORM	130	100	130	300	70	100
FECAL COLIFORM	30		22	110	2	
OIL AND GREASE	-		-	0	0	

- : ANALYSIS NOT REQUESTED

NOTE: ZERO (0) USED FOR ALL NON DETECT RESULTS FOR STATISTICAL PURPOSES

BPO/MCL: BASIN PLAN OBJECTIVES OR MAXIMUM CONTAMINENT LEVEL FOR
DRINKING WATER STANDARDS ESTABLISH FOR THIS WATER BODY

APCL

Applied P & Ch Laboratory

4066 E. Mission Blvd., Pomona CA 91766
 Tel: (909) 622-5148 Fax: (909) 622-3199

Chain of Custody

Please Print in pen
 Page 1 of 1

Client: ~~RCO~~ CB Contact: Nancy Olsen-Martin Tel: 909-782-4130 Fax: (909) 781-6250

Address: 2010 Tava Ave. St. 100 City: Riverside State: CA Zip code: 92507

Bill to: RCO-437 / ~~RCO~~ Same
 Project Name/Code: Strawberry Creek/Bautista Creek Job# P.O.#
 Project Address: N/A (Riverside County) Dennis Bacon
 Due Date: regular rush days Sampled by: DAB / PV

Sample ID (Field No.) (Site ID)	Sample Description (Location, Depth, Color, Odor and other useful information)	Collected Date Time	G R A B	C O M P	Matrix Type	Preser- vation	# of Cont.	Analysis Items				Remark
								Nutrients	Str Minerals	Bacteria	Oil + Grease	
B1	Bautista Creek	9/23/94 10:40	✓		Water	H ₂ SO ₄ /mu	3	✓	✓	✓		no oil + Grease
S2	Strawberry Creek at 273	9/23/94 12:15	✓		Water	" "	4	✓	✓	✓		
S3	Strawberry Creek at Forest Haven	9/23/94 2:55	✓		Water	" "	3	✓	✓	✓		no oil + Grease
S4	Strawberry Creek at 74	9/23/94 13:40	✓		Water	" "	4	✓	✓	✓		

Hazards Associated with Samples: NONE Disposal Options: Return Disposal by Lab

Sample Conditions: Seal# _____: Intact; Broken; None Temp.: Cold Room (____ °C). Hold Samples to _____

Relinquished by Nancy Olsen-Martin Date/Time 9/23/94 3:50 Received by Mark Roman Date/Time 9-23-94 4:30

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

APCL USE ONLY Service (Case)# _____ Note: RCO Code = 437

1) The signature on this document authorizes APCL to perform the services indicated herein according to APCL's terms and conditions (available upon request).
 2) Samples are discarded 45 days after received unless prearrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

1010 IOWA AVENUE, SUITE 100
 RIVERSIDE, CA 92507-2409
 PHONE: (714) 782-4130



CHAIN OF CUSTODY RECORD

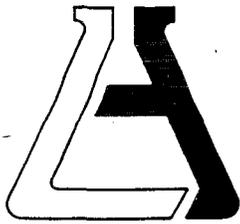
Date 4-26-94 Page 1 of 1

LABORATORY <i>Associates</i>	PROJECT MANAGER <i>Allan Bacon</i>
SECTION <i>Planning</i>	PHONE NUMBER <i>(909) 782-4962</i>
PROJECT NAME <i>Bautista Creek - Follow-up Algae</i>	SAMPLERS: (Signature) <i>Dennis Allan Bacon</i>

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
1	Bautista Creek @ Bautista Canyon Rd	4/26/95			✓			3	Std. Minerals & Nutrients
2	Bautista Creek parallel to Bautista Canyon Rd	4/26/95			✓			4 3	COD, Nutrient, Std Minerals
* 2a	STAGNANT H ₂ O @ Location 2	4/26/95			✓			4	COD, Nutrient Std Minerals Algae Sample *

Relinquished by: (Signature) <i>Dennis Allan Bacon</i>	Received by: (Signature) <i>[Signature]</i>	Date/Time <i>4/27/95 11:5</i>
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time	Received for Laboratory by: Date/Time
Method of Shipment:		

Special Instructions: <i>sample 2(a): * View under microscope for bacterial identification. -> To Determine what it is - Algae, or Bact - And if possible what kind.</i>	TASK CODE <i>437</i> ESTIMATED COST <i>\$350</i>
--	---



ASSOCIATED LABORATORIES

10 9/21

806 North Batavia - Orange, California 92668 - 714/771-6900

FAX 714/538-1209

CLIENT

California Regional Water
Attn: Nancy Olson-Martin
Quality Control Board
2010 Iowa Ave. - Suite 100
Riverside, CA 92507

(1079)

LAB NO.

G89257-01

REPORTED

05/19/95

SAMPLE

Water

RECEIVED

04/27/95

Sample #1-Bautista Creek @ Bautista Canyon Rd.

IDENTIFICATION

Bautista Creek Follow-Up

Date Collected 04/26/95

BASED ON SAMPLE

As Submitted

<u>Standard Mineral Analysis</u>	<u>Method</u>	<u>Date/ Analyst</u>	<u>Detection Limit (mg/l)</u>	<u>Result</u>
Total Alkalinity	SM 403	5/02/95 HK	5	227 mg/l
Ammonia-N	EPA 350.2	5/02/95 EM	0.1	ND*
Bicarbonate	SM 403	5/02/95 HK	5	277 mg/l
Boron	EPA 200.7	5/02/95 LB	0.02	0.075 mg/l
Calcium	EPA 200.7	5/02/95 LB	0.023	74.6 mg/l
Carbonate	SM 403	5/02/95 HK	5	ND*
Chloride	A1000	4/28/95 AA	1	45 mg/l
Electrical Conductivity	EPA 120.1	5/02/95 LN	1	873 μ mhos/cm
Fluoride	EPA 340.2	5/02/95 HK	0.05	0.73 mg/l
Iron	EPA 200.7	5/02/95 LB	0.003	0.22 mg/l
Magnesium	EPA 200.7	5/02/95 LB	0.04	26.8 mg/l
Nitrate-N	B1011	4/28/95 AA	0.1	ND*
pH	EPA 150.1	5/02/95 LN	---	8.19
Potassium	EPA 200.7	5/02/95 LB	0.50	6.81 mg/l
Sodium	EPA 200.7	5/02/95 LB	0.026	79.2 mg/l
Sodium Hydroxide	-----	5/02/95 AA	5	ND*
Sulfate	A1000	4/28/95 AA	1	151 mg/l
Total Anions	Calc.	5/02/95 EM	----	8.96 meq/l
Total Cations	Calc.	5/02/95 EM	----	9.53 meq/l
Dissolved Solids, Total	EPA 160.1	5/02/95 LN	5	614 mg/l
Total Hardness (As CaCO ₃)	Calc.	5/02/95 EM	----	296 mg/l
Phosphate-P, Total	EPA 365.2	5/02/95 HK	0.01	0.07 mg/l

TESTING & CONSULTING

Chemical •

Microbiological •

Environmental •

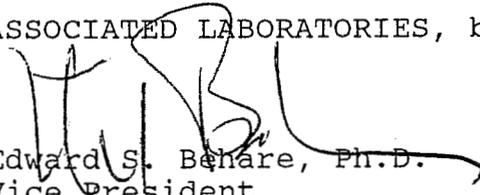
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Client: California Regional Water
 Quality Control Board
 Lab No.: G89257-01 Sample #1-Bautista Creek @ Bautista Canyon Rd.
 Date: May 19, 1995

COMBINED NUTRIENT ANALYSIS		Date Analyzed	Detection	Result
<u>Constituent</u>	<u>Method</u>	<u>& Analyst</u>	<u>Limit (mg/l)</u>	<u>(mg/l)</u>
Nitrogen, Ammonia	EPA 350.2	05/02/95 EM	0.1	ND*
Nitrogen, Kjeldahl	EPA 351.3	05/03/95 BGS	0.5	0.4
Nitrogen, Nitrate	B1011	04/29/95 AA	0.05	ND*
Nitrogen, Nitrite	B1011	04/29/95 AA	0.05	ND*
Nitrogen, Organic	Calc.	05/03/95 BGS	----	0.4
Phosphorus, Ortho	EPA 365.2	05/04/95 HK	0.01	0.06
Phosphorus, Total	EPA 365.4	05/04/95 HK	0.01	0.07

* None Detected.

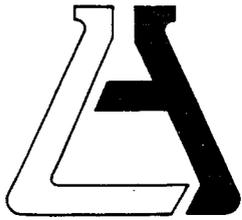
ASSOCIATED LABORATORIES, by:


 Edward S. Behare, Ph.D.
 Vice President

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.





ASSOCIATED LABORATORIES

806 North Batavia - Orange, California 92668 - 714/771-6900

FAX 714/538-1209

CLIENT

California Regional Water (1079)
Attn: Nancy Olson-Martin
Quality Control Board
2010 Iowa Ave. - Suite 100
Riverside, CA 92507

LAB NO. G89257-02
REPORTED 05/19/95

SAMPLE

Water

RECEIVED 04/27/95

IDENTIFICATION

Sample #2-Bautista Creek Parallel to Bautista Canyon Rd
Bautista Creek Follow-Up

BASED ON SAMPLE

Date Collected 04/26/95
As Submitted

<u>Standard Mineral Analysis</u>	<u>Method</u>	<u>Date/ Analyst</u>	<u>Detection Limit (mg/l)</u>	<u>Result</u>
Total Alkalinity	SM 403	5/02/95 HK	5	183 mg/l
Ammonia-N	EPA 350.2	5/02/95 EM	0.1	ND*
Bicarbonate	SM 403	5/02/95 HK	5	223 mg/l
Boron	EPA 200.7	5/02/95 LB	0.02	0.035 mg/l
Calcium	EPA 200.7	5/02/95 LB	0.023	64.4 mg/l
Carbonate	SM 403	5/02/95 HK	5	ND*
Chloride	A1000	4/28/95 AA	1	41 mg/l
Electrical Conductivity	EPA 120.1	5/02/95 LN	1	608 μ mhos/cm
Fluoride	EPA 340.2	5/02/95 HK	0.05	0.37 mg/l
Iron	EPA 200.7	5/02/95 LB	0.003	0.21 mg/l
Magnesium	EPA 200.7	5/02/95 LB	0.04	17.4 mg/l
Nitrate-N	B1011	4/28/95 AA	0.1	0.20 mg/l
pH	EPA 150.1	5/02/95 LN	---	7.93
Potassium	EPA 200.7	5/02/95 LB	0.50	4.99 mg/l
Sodium	EPA 200.7	5/02/95 LB	0.026	52.1 mg/l
Sodium Hydroxide	-----	5/02/95 AA	5	ND*
Sulfate	A1000	4/28/95 AA	1	93 mg/l
Total Anions	Calc.	5/02/95 EM	----	6.77 meq/l
Total Cations	Calc.	5/02/95 EM	----	7.04 meq/l
Dissolved Solids, Total	EPA 160.1	5/02/95 LN	5	456 mg/l
Total Hardness (As CaCO ₃)	Calc.	5/02/95 EM	----	232 mg/l
Phosphate-P, Total	EPA 365.2	5/02/95 HK	0.01	0.09 mg/l

TESTING & CONSULTING

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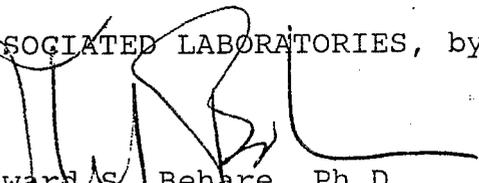
Chemical •
Microbiological •
Environmental •

Client: California Regional Water
 Quality Control Board
 Lab No.: G89257-02 Sample #2-Bautista Creek Parallel
 to Bautista Canyon Rd
 Date: May 19, 1995

COMBINED NUTRIENT ANALYSIS		Date Analyzed	Detection	Result
<u>Constituent</u>	<u>Method</u>	<u>& Analyst</u>	<u>Limit (mg/l)</u>	<u>(mg/l)</u>
Nitrogen, Ammonia	EPA 350.2	05/02/95 EM	0.1	ND*
Nitrogen, Kjeldahl	EPA 351.3	05/03/95 BGS	0.5	0.5
Nitrogen, Nitrate	B1011	04/29/95 AA	0.05	0.2
Nitrogen, Nitrite	B1011	04/29/95 AA	0.05	ND*
Nitrogen, Organic	Calc.	05/03/95 BGS	----	0.5
Phosphorus, Ortho	EPA 365.2	05/04/95 HK	0.01	0.07
Phosphorus, Total	EPA 365.4	05/04/95 HK	0.01	0.09
Chemical Oxygen Demand	EPA 410.4	05/01/95 LT	5	15

* None Detected.

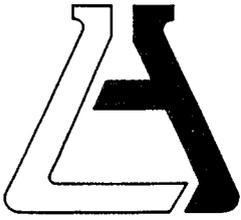
ASSOCIATED LABORATORIES, by:


 Edward S. Behare, Ph.D.
 Vice President

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.





ASSOCIATED LABORATORIES

806 North Batavia - Orange, California 92668 - 714/771-6900

FAX 714/538-1209

CLIENT

California Regional Water (1079)
Attn: Nancy Olson-Martin
Quality Control Board
2010 Iowa Ave. - Suite 100
Riverside, CA 92507

LAB NO. G89257-03
REPORTED 05/19/95

SAMPLE

Water

RECEIVED 04/27/95

IDENTIFICATION

Sample #2a-Stagnant Water @ Location 2
Bautista Creek Follow-Up
Date Collected 04/26/95
As Submitted

BASED ON SAMPLE

<u>Standard Mineral Analysis</u>	<u>Method</u>	<u>Date/ Analyst</u>	<u>Detection Limit (mg/l)</u>	<u>Result</u>
Total Alkalinity	SM 403	5/02/95 HK	5	339 mg/l
Ammonia-N	EPA 350.2	5/02/95 EM	0.1	0.2 mg/l
Bicarbonate	SM 403	5/02/95 HK	5	412 mg/l
Boron	EPA 200.7	5/02/95 LB	0.02	0.051 mg/l
Calcium	EPA 200.7	5/02/95 LB	0.023	101 mg/l
Carbonate	SM 403	5/02/95 HK	5	ND*
Chloride	A1000	4/28/95 AA	1	54 mg/l
Electrical Conductivity	EPA 120.1	5/02/95 LN	1	901 µmhos/cm
Fluoride	EPA 340.2	5/02/95 HK	0.05	0.48 mg/l
Iron	EPA 200.7	5/02/95 LB	0.003	22.8 mg/l
Magnesium	EPA 200.7	5/02/95 LB	0.04	23.0 mg/l
Nitrate-N	B1011	4/28/95 AA	0.1	ND*
pH	EPA 150.1	5/02/95 LN	---	6.93
Potassium	EPA 200.7	5/02/95 LB	0.50	5.15 mg/l
Sodium	EPA 200.7	5/02/95 LB	0.026	86.3 mg/l
Sodium Hydroxide	-----	5/02/95 AA	5	ND*
Sulfate	A1000	4/28/95 AA	1	83 mg/l
Total Anions	Calc.	5/02/95 EM	----	10.01 meq/l
Total Cations	Calc.	5/02/95 EM	----	10.82 meq/l
Dissolved Solids, Total	EPA 160.1	5/02/95 LN	5	750 mg/l
Total Hardness (As CaCO ₃)	Calc.	5/02/95 EM	----	347 mg/l
Phosphate-P, Total	EPA 365.2	5/02/95 HK	0.01	13.54 mg/l

TESTING & CONSULTING

Chemical •

Microbiological •

Environmental •

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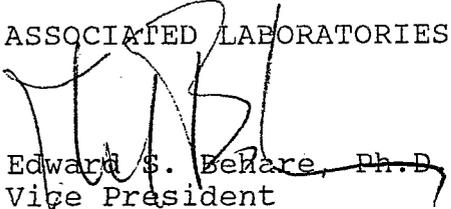
Client: California Regional Water
Quality Control Board
Lab No.: G89257-03 Sample #2a-Stagnant Water @ Location 2
Date: May 19, 1995

<u>Constituent</u>	<u>Method</u>	<u>Date Analyzed & Analyst</u>	<u>Detection Limit (mg/l)</u>	<u>Result (mg/l)</u>
Chemical Oxygen Demand	EPA 410.4	05/01/95 LT	5	116
Algae I.D.	-----	-----	-----	Synedra**

* None Detected.

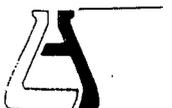
** Class of Taste and Odor Algae; Iron Bacteria = 11,000 cfu/ml

ASSOCIATED LABORATORIES, by:


Edward S. Benare, Ph.D.
Vice President

ESB/ql

NOTE: Unless notified in writing, all samples will be discarded
by appropriate disposal protocol 30 days from date reported.



ASSOCIATED LABORATORIES

QA REPORT FORM - INORGANICS

QC Sample: G89272
 Matrix: WATER
 Prep. Date: 05/01/95
 Analysis Date 05/01/95

Analyst: MT,LVB

Report Date: 09/19/95
 File Name : Q05015W
 Prep. Method: 3010
 Report by : T.T.

Lab ID#'s in Batch: G89272,257,264,291,285,290,289,282,279,354

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

REPORTING UNITS = MG/L									
TEST	Meth	Sample Result	ND	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
Arsenic	200.7	0.009		0.10	0.108	0.106	99.0	97.0	1.9
Selenium	200.7	0.004	U	0.10	0.104	0.107	104.0	107.0	2.8
Thallium	200.7	0.004	U	0.10	0.095	0.092	95.0	92.0	3.2
Lead	200.7	0.002	U	0.20	0.190	0.190	95.0	95.0	0.0
Aluminum	200.7	0.040	U	1.25	1.240	1.240	99.2	99.2	0.0
Antimony	200.7	0.130		1.25	1.400	1.400	101.6	101.6	0.0
Barium	200.7	0.070		1.25	1.330	1.320	100.8	100.0	0.8
Beryllium	200.7	0.001	U	1.25	1.290	1.280	103.2	102.4	0.8
Cadmium	200.7	0.003	U	1.25	1.250	1.260	100.0	100.8	0.8
Chromium	200.7	0.003	U	1.25	1.250	1.250	100.0	100.0	0.0
Cobalt	200.7	0.004	U	1.25	1.240	1.230	99.2	98.4	0.8
Copper	200.7	0.003	U	1.25	1.300	1.280	104.0	102.4	1.6
Iron	200.7	1.010		1.25	2.000	2.000	79.2	79.2	0.0
Manganese	200.7	1.240		1.25	2.560	2.550	105.6	104.8	0.4
Molybdenum	200.7	0.015		1.25	1.310	1.290	103.6	102.0	1.5
Nickel	200.7	0.012	U	1.25	1.250	1.240	100.0	99.2	0.8
Silver	200.7	0.003		0.50	0.430	0.470	85.4	93.4	8.9
Vanadium	200.7	0.004	U	1.25	1.260	1.250	100.8	100.0	0.8
Zinc	200.7	0.003		1.25	1.260	1.260	100.6	100.6	0.0

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS&MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate



ASSOCIATED LABORATORIES

LCS/PB REPORT FORM - INORGANICS

Code #:	<u>H050195</u>	Date:	<u>09/19/95</u>
LCS ID :	<u>QC#7/QC#19</u>	File:	<u>L05015W</u>
Matrix:	<u>WATER</u>	Prep. Method :	<u>3010</u>
Prep.Date:	<u>05/01/95</u>	Report by :	<u>T.T.</u>
Analysis Date	<u>05/01/95</u>	Analyst:	<u>LVB,MT</u>

Lab ID#'s in Batch: G89272,257,264,291,285,290,289,282,279

REPORTING UNITS		=						MG/L	
Element	Meth	Result	True	%Rec	L.Limit	H.Limit	PB	ND	
Arsenic	200.7	2.132	2.00	106.6	80%	120%	0.002	U	
Lead	200.7	2.073	2.00	103.7	80%	120%	0.001	U	
Selenium	200.7	2.060	2.00	103.0	80%	120%	0.003	U	
Thallium	200.7	1.989	2.00	99.5	80%	120%	0.003	U	
Aluminum	200.7	2.013	2.00	100.7	80%	120%	0.036	U	
Antimony	200.7	1.958	2.00	97.9	80%	120%	0.021	U	
Barium	200.7	2.039	2.00	102.0	80%	120%	0.005	U	
Beryllium	200.7	1.954	2.00	97.7	80%	120%	0.002	U	
Cadmium	200.7	1.915	2.00	95.8	80%	120%	0.003	U	
Chromium	200.7	1.974	2.00	98.7	80%	120%	0.003	U	
Cobalt	200.7	1.969	2.00	98.5	80%	120%	0.007	U	
Copper	200.7	1.986	2.00	99.3	80%	120%	0.004	U	
Iron	200.7	1.938	2.00	96.9	80%	120%	0.003	U	
Manganese	200.7	1.961	2.00	98.1	80%	120%	0.001	U	
Molybdenum	200.7	1.967	2.00	98.4	80%	120%	0.006		
Nickel	200.7	1.984	2.00	99.2	80%	120%	0.009	U	
Silver	200.7	1.861	2.00	93.1	80%	120%	0.004	U	
Vanadium	200.7	1.938	2.00	96.9	80%	120%	0.004	U	
Boron	200.7	1.945	2.00	97.3	80%	120%	0.008	U	
Zinc	200.7	2.200	2.00	110.0	80%	120%	0.003		

Notes : RESULT = Sample Result; TRUE = True Value; %Rec = 100*Result/True

L.LIMIT/H.LIMIT = Low/High Control Limits

PB = Preparation Blank; ND = " U " for Non- Detected



ASSOCIATED LABORATORIES

QA REPORT FORM - INORGANICS

QC Sample:	<u>G89264-1</u>	Report Date:	<u>09/19/95</u>
Matrix:	<u>WATER</u>	File Name:	<u>F05025W</u>
Prep. Date:	<u>05/02/95</u>	Analysis Date:	<u>05/02/95</u>
Analyst:	<u>E.M.</u>	Report by :	<u>T.T.</u>
ID#'s in Batch:	<u>G89272,264,257</u>		

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample	Spike	Matrix	Matrix	%Rec	%Rec	RPD	
		Result	ND	Added	Spike	Spike Dup	MS		MSD
F	340.2	0.38		0.67	1.05	1.05	100.0	100.0	0.0

%REC LIMITS = 75 - 125

RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
0.01	U	1.050	1.000	105.0	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



ASSOCIATED LABORATORIES

QA REPORT FORM - INORGANICS

QC Sample:	<u>G89257-1</u>	Report Date:	<u>09/19/95</u>
Matrix:	<u>WATER</u>	File Name:	<u>OP0405W</u>
Prep. Date:	<u>05/04/95</u>	Analysis Date:	<u>05/04/95</u>
Analyst:	<u>H.K.</u>	Report by :	<u>T.T.</u>
ID#'s in Batch:	<u>G89220, 257,375</u>		

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample	Spike	Matrix	Matrix	%Rec	%Rec	RPD	
		Result	ND	Added	Spike	Spike Dup	MS		MSD
Ortho P.	365.2	0.06		0.52	0.59	0.59	101.9	101.9	0.0

%REC LIMITS = 75 - 125

RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
0.01	U	0.390	0.400	97.5	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



ASSOCIATED LABORATORIES
QA REPORT FORM - INORGANICS

QC Sample: G89264-1 Report Date: 09/19/95
 Matrix: WATER File Name: PO0504W
 Prep. Date: 05/04/95 Analysis Date: 05/04/95
 Analyst: HK Report by : T.T.
 ID#'s in Batch: G89131,220,257,264,375

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample Result	ND	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
Total P.	365.2	0.24		0.26	0.49	0.51	96.2	103.8	4.0

%REC LIMITS = 75 - 125
RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
0.01	U	0.50	0.50	100.0	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



ASSOCIATED LABORATORIES
QA REPORT FORM - INORGANICS

QC Sample: G89272 Report Date: 09/19/95
 Matrix: WATER File Name: CO0501W
 Prep. Date: 05/01/95 Analyst : L.T.
 Analyst Date: 05/01/95 Report By : T.T.
 ID#'s in Batch: G89276,257,272

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample Result	Spike ND	Matrix Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
COD	410.4	8.00		100.00	110.00	120.00	102.0	112.0	8.7

%REC LIMITS = 75 - 125
RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
5.00	U	100.00	100.00	100.0	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



ASSOCIATED LABORATORIES
QA REPORT FORM - INORGANICS

QC Sample: G89257-1 Report Date: 09/19/95
 Matrix: WATER File Name: NH05085W
 Prep. Date: 05/08/95 Analysis Date: 05/08/95
 Analyst: E.M. Report by : M.T.
 ID#'s in Batch: G89257, 456

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample Result	Spike ND	Matrix Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
Ammonia	SM4500C	0.10	U	5.00	5.10	4.62	102.0	92.4	9.9

%REC LIMITS = 75 - 125

RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
0.10	U	1.64	2.00	82.0	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



ASSOCIATED LABORATORIES

QA REPORT FORM - INORGANICS

QC Sample:	<u>G89257</u>	Report Date:	<u>09/19/95</u>
Matrix:	<u>WATER</u>	File Name :	<u>IC04285W</u>
Prep. Date:	<u>04/28/95</u>	Report by :	<u>T.T.</u>
Analysis Date:	<u>04/28/95</u>	Analyst:	<u>BGS</u>

LAB ID#'s in Batch: G89257, 89272

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

REPORTING UNITS = MG/L									
Test	Method	Sample Result	Spike ND	Matrix Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
CL	A1000	45.00		200.00	235.00	240.00	95.0	97.5	2.1
SO4	A1000	151.00		200.00	345.00	335.00	97.0	92.0	2.9
NO2/N	B1011	0.05	U	12.50	13.80	13.80	110.4	110.0	0.0
NO3/N	B1011	0.05	U	11.30	10.80	10.90	95.6	96.0	0.9

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Dup

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

Test	Method	PREP BLANK		LCS				
		Value	ND	Result	True	%Rec	L.Limit	H.Limit
CL	A1000	1.00	U	50.00	50.00	100.0	80%	120%
SO4	A1000	1.00	U	49.00	50.00	98.0	80%	120%
NO2/N	B1011	0.05	U	2.40	2.49	96.4	80%	120%
NO3/N	B1011	0.05	U	2.35	2.26	104.0	80%	120%

VALUE = Preparation Blank Value; ND = "U" for Not-Detected

LCS = Lab Control Sample Result

TRUE = True Value of LCS

L.LIMIT / H.LIMIT = LCS Control Limits



ASSOCIATED LABORATORIES

QA REPORT FORM - ORGANICS

QC Sample: G89132 Report Date: 09/19/95
 Matrix: WATER File Name: TK05035W
 Prep. Date: 05/03/95 Analysis Date: 05/03/95
 Analyst: BGS Report by: T.T.
 ID#'s in Batch: G89132, 89257

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Reporting Units = MG/L

Test	Method	Sample Result	ND	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	RPD
TKN	351.3	44.50		40.00	87.90	89.00	108.5	111.3	1.2

%REC LIMITS = 80 - 120

RPD LIMITS = 20

ND = "U" - Not Detected

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate

%REC-MS & MSD = Percent Recovery of Matrix Spike & Matrix Spike Duplicate

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

PREP BLANK		LCS				
Value	ND	Result	True	%Rec	L.Limit	H.Limit
0.50	U	7.80	8.00	97.5	80%	120%

Value = Preparation Blank Value; ND = "U" for Not-Detected

LCS Result = Lab Control Sample Result

True = True Value of LCS

L.Limit / H.Limit = LCS Control Limits



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

1010 IOWA AVENUE, SUITE 100

RIVERSIDE, CA 92507-2409

PHONE: (714) 782-4130



CG 9257

CHAIN OF CUSTODY RECORD

Date 4-26-94 Page 1 of 1

LABORATORY <i>Associates</i>	PROJECT MANAGER <i>Allan Bacon</i>
SECTION <i>Planning</i>	PHONE NUMBER <i>(909) 782-4962</i>
PROJECT NAME <i>Bautista Creek - Follow-up Algae</i>	SAMPLERS: (Signature) <i>Dennis Allan Bacon</i>

SAMPLE NUMBER	LOCATION DESCRIPTION	DATE	TIME	SAMPLE TYPE			SOLID	NO. OF CNTNRS	TESTS REQUIRED
				WATER		AIR			
				Comp.	Grab.				
1	<i>Bautista Creek @ Bautista Canyon Rd</i>	<i>4/26/95</i>			<input checked="" type="checkbox"/>			<i>3</i>	<i>Std. Minerals & Nutrient</i>
2	<i>Bautista Creek Parallel to Bautista Canyon Rd</i>	<i>4/26/95</i>			<input checked="" type="checkbox"/>			<i>4</i>	<i>COD, Nutrient, Std Minerals</i>
<i>* 2a</i>	<i>STAGNANT H₂O @ Location 2</i>	<i>4/26/95</i>			<input checked="" type="checkbox"/>			<i>4</i>	<i>COD, Std Minerals</i>
									<i>Algae Sample *</i>

Relinquished by: (Signature) <i>Dennis Allan Bacon</i>	Received by: (Signature) <i>[Signature]</i>	Date/Time <i>4/27/95 11:15</i>
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time	Received for Laboratory by: Date/Time
Method of Shipment:		

Special Instructions: <i>Sample 2(a): * View under microscope for bacterial identification. -> Determine what it is - Algae or Bact - and if possible what kind.</i>	TASK CODE <i>437</i>
	ESTIMATED COST <i>\$ 350</i>